

FOOT" 246T8660

TCG ACC CAC GCG TCC GGC CTT GGC AGA GTC TGG GGT CCC TGG ACT GAG CCA TCA GCT GGG  
TCA CTG AGA CCC ATG GCA AGG AAA CAA AAT AGG AAT TCC AAG GAA CTG GGC CTA GTT CCC  
CTC ACA GAT GAC ACC AGC CAC GCC GGC CCT CCA GGG CCA GGG AGG GCA CTG CTG GAG TGT  
GAC CAC CTG AGG AGT GGG GTG CCA GGT GGA AGG AGA AAG GAC TGG TCC TGC TCG CTC  
CTC GTG GCC TCC CTC GCG GGC GCC TTC GGC TCC TCC TTC CTC TAC GGC TAC AAC CTG TCG  
GTG GTG AAT GCC CCC ACC CCG TAC ATC AAG GCC TTT TAC AAT GAG TCA TGG GAA AGA AGG  
CAT GGA CGT CCA ATA GAC CCA CAC ACT CTG ACT CTG CTC TGG TCT GTG ACT GTG TCC ATA  
TTC GCC ATC GGT GGA CTT GTG GGC ACG TTA ATT GTG AAG ATG ATT GGA AAG GTT CTT GGG

FIG. 1A

TOBTOT" 246T8550

AGG AAG CAC ACT TTG CTG GCC AAT AAT GGG TTT GCA ATT TCT GCT GCA TTG CTG ATG GCC  
TGC TCG CTC CAG GCA GGA GCC TTT GAA ATG CTC ATT GTG GGA CGC TTC ATC ATG GGC ATA  
GAT GGA GGC GTC GCC CTC AGT GTG CTC CCC ATG TAC CTC AGT GAG ATC TCA CCC AAG GAG  
ATC CGT GGC TCT CTG GGG CAG GTG ACT GCC ATC TTT ATC TGC ATT GGC GTG TTC ACT GGG  
CAG CTT CTG GGC CTG CCC GAG CTG CTG GGA AAG GAG AGT ACC TGG CCA TAC CTG TTT GGA  
GTG ATT GTG GTC CCT GCC GTT GTC CAG CTG CTG AGC CTT CCC TTT CTC CCG GAC AGC CCA  
CGC TAC CTG CTC TTG GAG AAG CAC AAC GAG GCA AGA GCT GTG AAA GCC TTC CAA ACG TTC

FIG. 1B

TTG GGT AAA GCA GAC GTT TCC CAA GAG GTA GAG GAG GTC CTC GCT GAG AGC CAC GTG CAG  
 AGG AGC ATC CGC CTG GTG TCC GTG CTG GAG CTG AGA GCT CCC TAC GTC CGC TGG CAG  
 GTG GTC ACC GTG ATT GTC ACC ATG GCC TGC TAC CAG CTC TGT GGC CTC AAT GCA ATT TGG  
 TTC TAT ACC AAC AGC ATC TTT GGA AAA GCT GGG ATC CCT CCG GCA AAG ATC CCA TAC GTC  
 ACC TTG AGT ACA GGG GGC ATC GAG ACT TTG GCT GCC GTC TTC TCT GGT TTG GTC ATT GAG  
 CAC CTG GGA CGG AGA CCC CTC CTC ATT GGT GGC TTT GGG CTC ATG GGC CTC TTC TTT GGG  
 ACC CTC ACC ATC ACG CTG ACC CTG CAG GAC CAC GCC CCC TGG GTC CCC TAC CTG AGT ATC  
 GTG GGC ATT CTG GCC ATC ATC GCC TCT TTC TGC AGT GGG CCA GGT GGC ATC CCG TTC ATC

FIG. 1C

TTTTTTT " 445T8660

TTG ACT GGT GAG TTC TTC CAG CAA TCT CAG CGG GCT GCC TTC ATC ATT GCA GGC ACC  
GTC AAC TGG CTC TCC AAC TTT GCT GTT GGG CTC CTC TTC CCA TTC ATT CAG AAA AGT CTG  
GAC ACC TAC TGT TTC CTA GTC TTT GCT ACA ATT TGT ATC ACA GGT GCT ATC TAC CTG TAT  
TTT GTG CTG CCT GAG ACC AAA AAC AGA ACC TAT GCA GAA ATC AGC CAG GCA TTT TCC AAA  
AGG AAC AAA GCA TAC CCA CCA GAA GAG AAA ATC GAC TCA GCT GTC ACT GAT GCT CCT GCT  
TCT TCT CCT TTC ACT ACT CCG AAT ACA GCC TGG ATT CAA GCT GCC GCC ACC ACC GCC  
ACC AAA AAA GAA CAC CCA TTG TAA ACG GTC ATG TGG TAT TTC CTC AAC CTG GAA TGA CCT

FIG. 1D

**FIG. 1E**

TD8F0T" 246T8660

met ala arg lys gln asn arg asn ser lys glu leu gly leu val pro  
leu thr asp asp thr ser his ala gly pro pro gly pro gly arg ala leu leu glu cys  
asp his leu arg ser gly val pro gly gly arg arg lys asp trp ser cys ser leu  
leu val ala ser leu ala gly ala phe gly ser ser phe leu tyr gly tyr asn leu ser  
val val asn ala pro thr pro tyr ile lys ala phe tyr asn glu ser trp glu arg arg  
his gly arg pro ile asp pro asp thr leu thr leu leu trp ser val thr val ser ile  
phe ala ile gly gly leu val gly thr leu ile val lys met ile gly lys val leu gly

**FIG. 2A**

FOOTNOTES

arg lys his thr leu leu ala asn asn gly phe ala ile ser ala ala leu leu met ala  
cys ser leu gln ala gly ala phe glu met leu ile val gly arg phe ile met gly ile  
asp gly gly val ala leu ser val leu pro met tyr leu ser glu ile ser pro lys glu  
ile arg gly ser leu gly gln val thr ala ile phe ile cys ile gly val phe thr gly  
gln leu leu gly leu pro glu leu leu gly lys glu ser thr trp pro tyr leu phe gly  
val ile val val pro ala val val gln leu leu ser leu pro phe leu pro asp ser pro  
arg tyr leu leu glu lys his asn glu ala arg ala val lys ala phe gln thr phe

FIG. 2B

leu gly lys ala asp val ser gln glu val glu glu val leu ala glu ser his val gln  
 arg ser ile arg leu val ser val leu glu leu leu arg ala pro tyr val arg trp gln  
 val val thr val ile val thr met ala cys tyr gln leu cys gly leu asn ala ile trp  
 phe tyr thr asn ser ile phe gly lys ala gly ile pro pro ala lys ile pro tyr val  
 thr leu ser thr gly gly ile glu thr leu ala ala val phe ser gly leu val ile glu  
 his leu gly arg arg pro leu leu ile gly gly phe gly leu met gly leu phe phe gly  
 thr leu thr ile thr leu thr leu gln asp his ala pro trp val pro tyr leu ser ile  
 val gly ile leu ala ile ile ala ser phe cys ser gly pro gly gly ile pro phe ile

**FIG. 2C**



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leu thr gly glu phe phe gln gln ser gln arg pro ala phe ile ala gly thr  
val asn trp leu ser asn phe ala val gly leu phe pro phe ile gln lys ser leu  
asp thr tyr cys phe leu val phe ala thr ile cys ile thr gly ala ile tyr leu tyr  
phe val leu pro glu thr lys asn arg thr tyr ala glu ile ser gln ala phe ser lys  
arg asn lys ala tyr pro pro glu glu lys ile asp ser ala val thr asp ala pro ala  
ser ser pro phe thr thr pro asn thr ala trp ile gln ala ala thr thr thr ala  
thr lys lys glu his pro leu

FIG. 2D

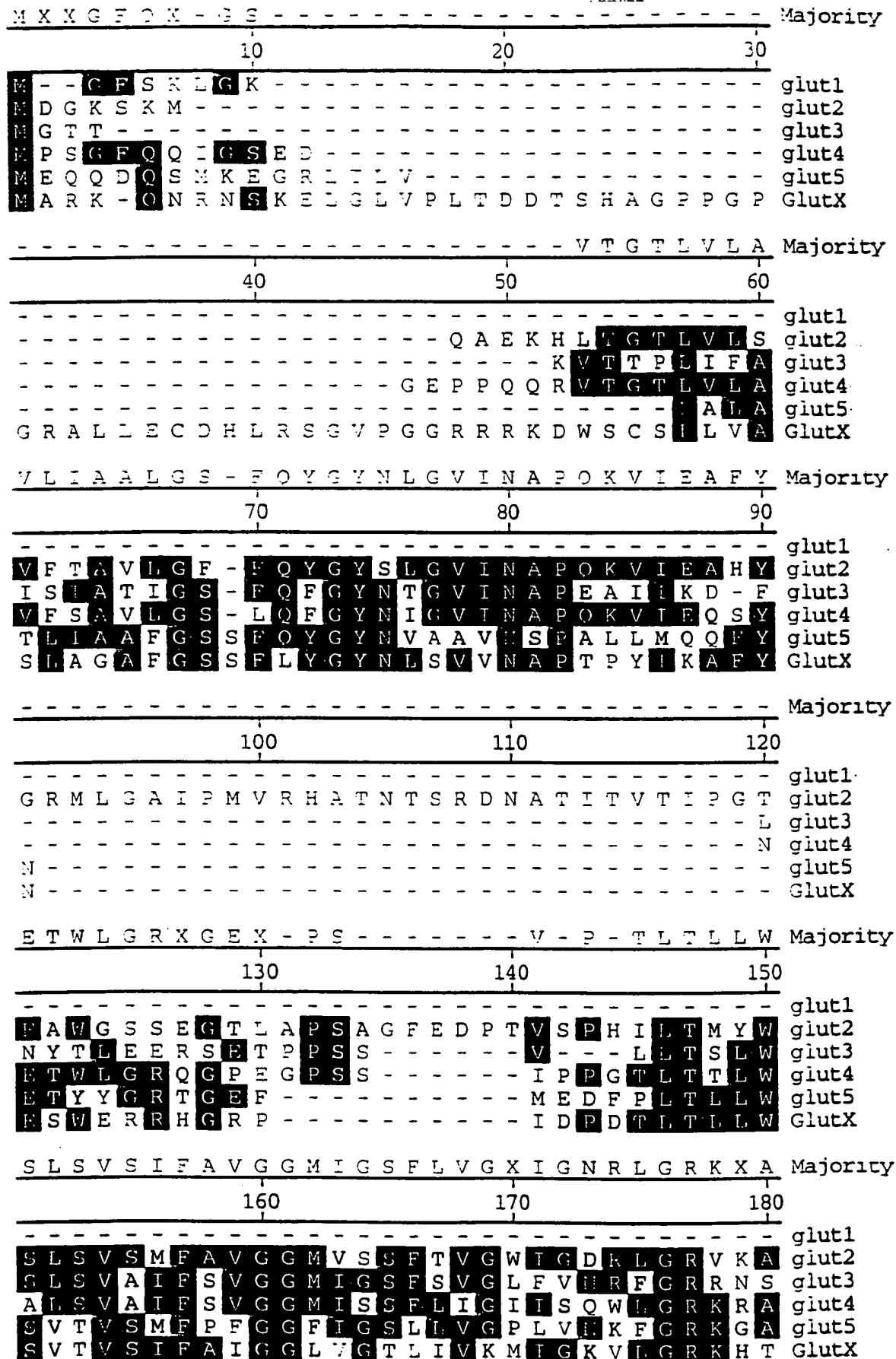


FIG. 3A

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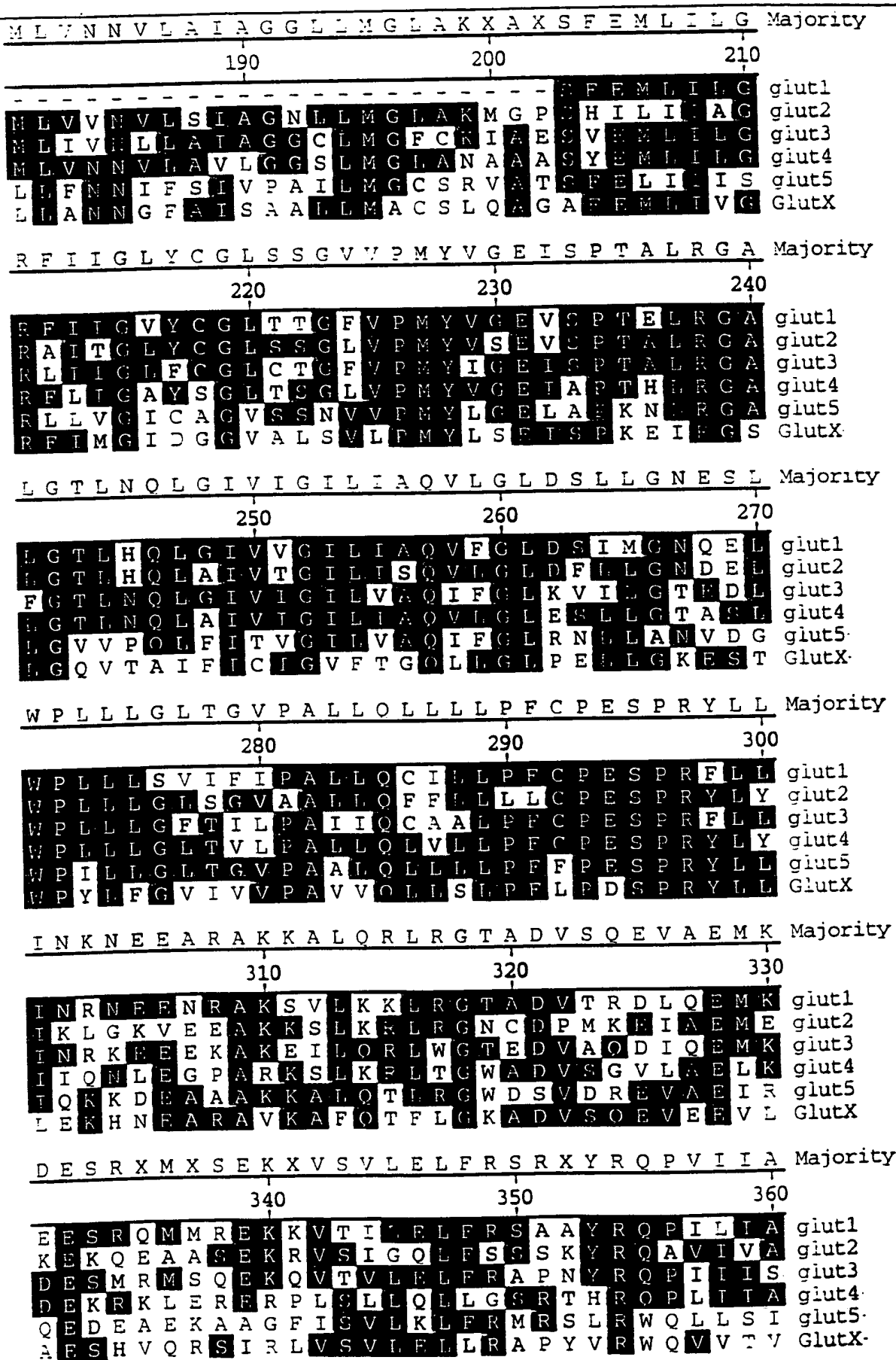


FIG. 3B

I V L Q L S Q Q L S G I N A V F Y Y S T S I F E K A G V G Q																																Majority
370																380																390
167	V	V	L	Q	L	S	Q	Q	L	S	G	I	N	A	V	F	Y	Y	S	T	S	I	F	E	K	A	G	V	Q	Q	glut1-pro	
320	L	M	V	Q	I	S	Q	Q	F	S	G	I	N	A	I	F	Y	Y	S	T	N	I	F	Q	R	A	G	V	G	Q	glut2-pro	
274	I	M	L	Q	L	S	Q	Q	L	S	G	I	N	A	V	F	Y	Y	S	T	G	I	F	K	D	A	G	V	Q	E	glut3-pro	
292	V	V	L	Q	L	S	Q	Q	L	S	G	I	N	A	V	F	Y	Y	S	T	S	I	F	E	T	A	G	V	G	Q	glut4-pro	
282	I	V	L	M	G	G	Q	Q	L	S	G	V	N	A	I	Y	Y	Y	A	D	Q	L	Y	L	S	A	G	V	P	E	glut5-pro	
321	I	V	T	M	A	C	Y	Q	L	C	G	L	N	A	I	W	F	Y	T	N	I	F	E	G	E	A	G	I	P	P	GlutX-pro-	
P - - V Y A T I G A G V V N T V F T V V S V F V V E R A G R																																final-2/6/98
P - - V Y A T I G A G V V N T V F T V V S V F V V E R A G R																																Majority
400																410																420
197	P	-	-	V	Y	A	T	I	G	S	G	I	V	N	T	A	F	T	V	V	S	L	E	V	V	E	R	A	G	R	glut1-pro	
350	P	-	-	V	Y	A	T	I	G	V	G	V	V	N	T	V	F	T	V	I	S	V	E	L	V	E	K	A	G	R	glut2-pro	
304	P	-	-	V	Y	A	T	I	G	A	G	V	V	N	T	I	F	T	V	V	S	V	E	L	V	E	R	A	G	R	glut3-pro	
322	P	-	-	A	Y	A	T	I	G	A	G	V	V	N	T	V	F	T	L	V	S	V	L	L	V	E	R	A	G	R	glut4-pro	
312	E	H	V	Q	V	V	T	A	G	T	G	A	V	N	V	M	T	F	C	A	V	F	V	E	L	L	G	R	glut5-pro			
351	A	K	I	P	Y	V	T	L	S	T	G	G	I	E	T	L	A	A	V	F	S	G	L	V	I	F	H	L	G	R	GlutX-pro-	
R T L H L L G L G G M A G C A V L M T I A L A L L D Q V P W																																final-2/6/98
R T L H L L G L G G M A G C A V L M T I A L A L L D Q V P W																																Majority
430																440																450
225	R	T	L	H	L	I	G	L	A	G	M	A	G	C	A	V	L	M	T	I	A	L	A	L	L	E	Q	L	P	W	glut1-pro	
378	R	S	L	F	L	A	G	L	M	G	M	L	I	S	A	V	A	M	T	V	G	L	V	L	L	S	Q	F	A	W	glut2-pro	
332	R	T	L	H	L	I	G	L	G	G	M	A	F	C	S	I	M	T	I	S	L	L	L	K	D	N	Y	S	W	glut3-pro		
350	R	T	L	H	L	L	C	L	A	G	M	C	G	C	A	I	L	M	T	V	A	L	L	L	L	E	R	V	P	A	glut4-pro	
342	R	L	L	L	L	L	G	F	S	I	C	L	I	A	C	C	V	L	T	A	A	L	A	L	Q	D	T	V	S	W	glut5-pro	
381	R	P	L	L	I	G	G	F	G	L	M	G	L	F	F	G	T	L	T	I	T	E	T	L	Q	D	H	A	P	W	GlutX-pro-	
M S Y V S I V A I F G F V A F F E V G P G P I P W F I V A E																																final-2/6/98
M S Y V S I V A I F G F V A F F E V G P G P I P W F I V A E																																Majority
460																470																480
255	M	S	Y	L	S	I	V	A	I	F	G	F	V	A	F	F	E	V	G	P	G	P	I	P	W	F	I	V	A	E	glut1-pro	
408	M	S	Y	V	S	M	V	A	I	F	L	F	V	I	F	F	E	V	G	P	G	P	I	P	W	F	I	V	A	E	glut2-pro	
362	M	S	F	I	C	I	G	A	I	L	V	F	V	A	F	F	E	I	G	P	G	P	I	P	W	F	I	V	A	E	glut3-pro	
380	M	S	Y	V	S	I	V	A	I	F	G	F	V	A	F	F	E	I	G	P	G	P	I	P	W	F	I	V	A	E	glut4-pro	
372	M	P	Y	I	S	I	V	C	V	I	S	Y	V	I	G	H	A	L	G	P	S	P	I	P	A	L	L	I	T	E	glut5-pro	
411	V	P	Y	L	S	I	V	G	I	L	A	I	I	A	S	F	C	S	G	P	G	G	T	P	F	I	L	T	G	E	GlutX-pro-	
L F S Q G P R P A A I A V A G F S N W T S N F I V G L L F Q																																final-2/6/98
L F S Q G P R P A A I A V A G F S N W T S N F I V G L L F Q																																Majority
490																500																510
285	L	F	S	Q	G	P	R	P	A	A	I	A	V	A	G	F	S	N	W	T	S	N	F	I	V	G	M	C	F	Q	glut1-pro	
438	L	F	S	Q	G	P	R	P	A	A	I	A	V	A	G	F	C	N	W	A	C	E	F	I	V	G	M	C	F	Q	glut2-pro	
392	L	F	G	Q	G	P	R	P	A	A	M	A	V	A	G	C	S	N	W	T	S	N	F	L	V	G	L	L	F	P	glut3-pro	
410	L	F	S	Q	G	P	R	P	A	A	M	A	V	A	G	F	S	N	W	T	S	N	F	I	I	G	M	G	F	Q	glut4-pro	
402	I	F	L	Q	S	S	R	P	S	A	F	M	V	G	G	S	V	H	W	L	S	N	F	T	V	G	L	I	F	P	glut5-pro	
441	F	F	Q	Q	S	Q	R	P	A	A	F	I	I	A	G	T	V	I	W	L	S	N	F	A	V	G	L	L	F	P	GlutX-pro-	
Y I A E L L G P Y V F I V F A V L L L L F F I F T F L K V P																																final-2/6/98
Y I A E L L G P Y V F I V F A V L L L L F F I F T F L K V P																																Majority
520																530																540
315	Y	V	E	Q	L	C	G	P	Y	V	F	I	I	F	T	V	L	L	V	L	F	F	I	F	T	Y	F	K	V	P	glut1-pro	
468	Y	I	A	D	L	C	G	P	Y	V	F	V	V	F	A	V	L	L	V	F	F	L	F	A	Y	L	K	V	P	glut2-pro		
422	S	A	T	F	Y	L	G	A	Y	V	F	I	V	F	T	V	F	L	V	I	F	W	V	F	T	F	F	K	V	P	glut3-pro	
440	Y	V	A	E	A	M	G	P	Y	V	F	L	L	F	A	V	L	L	L	G	F	F	I	F	T	F	L	R	V	P	glut4-pro	
432	F	I	Q	E	G	L	G	P	Y	S	F	I	V	F	A	V	I	C	L	L	T	T	I	Y	I	F	L	I	V	P	glut5-pro	
471	F	I	Q	K	S	L	D	T	Y	C	F	L	V	F	A	T	I	C	I	T	G	A	I	Y	L	Y	F	V	L	P	GlutX-pro-	
Y I A E L L G P Y V F I V F A V L L L L F F I F T F L K V P																																final-2/6/98

FIG. 3C

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ETKGRTEDEIAA AFRKXNKX - EQ - PEKESI																				Majority
550					560					570										
ETKGRTEDEIA	S	G	F	R	Q	G	G	A	-	-	S	O	-	S	D	K	T	P	E	glut1
ETKGRTEDEIA	E	E	I	A	A	A	F	R	R	K	K	L	P	A	K	-	-	-	-	glut2
ETRGRTFEEI	T	R	A	F	E	G	Q	V	Q	T	G	T	R	-	G	E	K	G	P	glut3
ETRGRTFDDQ	I	S	A	A	F	H	E	T	P	S	L	L	E	O	-	E	V	K	P	glut4
ETKAKTFEIE	I	N	Q	I	F	T	K	M	N	K	V	S	E	V	Y	P	E	K	E	glut5
ETKNRTYAEI	S	Q	A	F	S	K	R	N	K	A	-	-	-	Y	P	P	E	E	K	GlutX
EELEPLGPD - - - - -																				Majority
580					590					600										
FLFHPLGAD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	glut1
TELEDIRGG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	glut2
MEMNSIQPT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	glut3
EL - EYLGPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	glut4
KELPPVTSSE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	glut5
DSAVTDA PA	S	S	P	F	T	T	P	N	T	A	W	I	Q	A	A	A	T	T	A	GlutX
- - E - - X -																				Majority
- - S Q V .																				glut1
- - E - - E A																				glut2
- - K D T N A																				glut3
- - E N - D																				glut4
- - - - - Q																				glut5
K K E H P L .																				GlutX

FIG. 3D

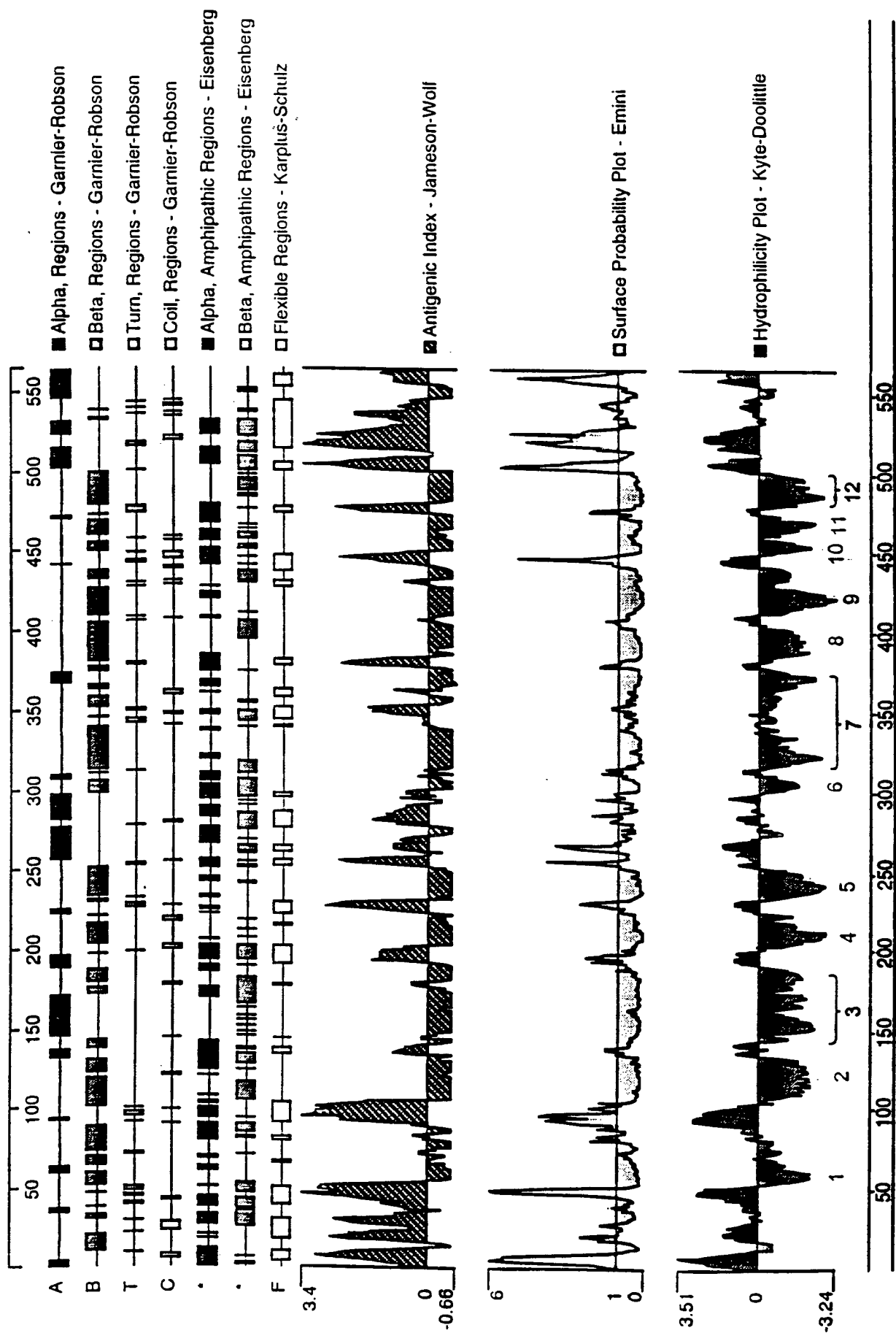


FIG. 4